US Serial No. 10/776,648
Amendment and Response dated September 21, 2006

Office Action mailed March 21, 2006

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listing, of claims in the

application:

Listing of Claims:

1. (Currently Amended) A method of making a rigid polyurethane foam, comprising

mixing a polyisocyanate component with a polyol component in the presence of at least one

catalyst for the reaction of a polyol or water with a polyisocyanate and subjecting the mixture to

conditions sufficient to cure to form a polyurethane foam, wherein (a) the polyisocyanate

component contains an isocyanate-terminated prepolymer made by reacting an excess of an

organic polyisocyanate with (i) at least one polyol and (ii) at least one hydroxy-functional

acrylate, (b) the polyol component contains an effective amount of a blowing agent and

isocyanate-reactive materials that include at least one hydrophobic polyol selected from the

group consisting of castor oil, soybean oil, and combinations thereof: [and] (c) the ratio of

isocyanate groups in the polyisocyanate component to the number of isocyanate-reactive

groups in the polyol component is less than 1:1; and (d) the polyisocyanate component has a

functionality of between about 2.0 and about 4.0.

2. (Original) The invention according to claim 1, wherein the polyurethane foam

has a bulk density in the range of about 2 to about 40 pounds per cubic foot.

3. (Original) The invention according to claim 1, wherein the volume ratio of the

polyisocyanate component to polyol component is about 1:1.

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- 4. (Original) The invention according to claim 1, wherein the hydroxy-functional acrylate is a methacrylate.
- 5. (Original) The invention according to claim 1, wherein at least one polyol in the polyol component contains a tertiary amine group.
- 6. (Original) The invention according to claim 1, wherein the catalyst includes a reactive amine catalyst.
- 7. (Original) The invention according to claim 1, wherein the blowing agent is water or a chemical blowing agent that releases CO₂.
- 8. (Original) The invention according to claim 1, wherein the organic polyisocyanate is MDI or a polymeric MDI.
- 9. (Original) The invention according to claim 1, wherein the foam is formed into an automotive component.
- 10. (Currently Amended) A rigid polyurethane foam formed by mixing a polyisocyanate component with a polyol component in the presence of at least one catalyst for the reaction of a polyol or water with a polyisocyanate and subjecting the mixture to conditions sufficient to cure to form a polyurethane foam, wherein (a) the polyisocyanate component contains an isocyanate-terminated prepolymer made by reacting an excess of an organic polyisocyanate with (i) at least one polyol and (ii) at least one hydroxy-functional acrylate, (b)

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the polyol component contains an effective amount of a blowing agent and isocyanate-reactive

materials that include at least one hydrophobic polyol selected from the group consisting of

castor oil, soybean oil, and combinations thereof; [and] (c) the ratio of isocyanate groups in the

polyisocyanate component to the number of isocyanate-reactive groups in the polyol component

is less than 1:1; and (d) the polyisocyanate component has a functionality of between about 2.0

and about 4.0.

11. (Original) The invention according to claim 10, wherein the polyurethane foam

has a bulk density in the range of about 2 to about 40 pounds per cubic foot.

12. (Original) The invention according to claim 10, wherein the volume ratio of the

polyisocyanate component to polyol component is about 1:1.

13. (Original) The invention according to claim 10, wherein the hydroxy-functional

acrylate is a methacrylate.

14. (Original) The invention according to claim 10, wherein at least one polyol in the

polvol component contains a tertiary amine group.

15. (Original) The invention according to claim 10, wherein the catalyst includes a

reactive amine catalyst.

16. (Original) The invention according to claim 10, wherein the blowing agent is

water or a chemical blowing agent that releases CO₂.

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17. (Original) The invention according to claim 10, wherein the organic

polyisocyanate is MDI or a polymeric MDI.

18. (Original) The invention according to claim 10, wherein the foam is formed into

an automotive component.

19. (Currently Amended) A rigid polyurethane foam formed by mixing a

polyisocyanate component with a polyol component in the presence of at least one catalyst for

the reaction of a polyol or water with a polyisocyanate and subjecting the mixture to conditions

sufficient to cure to form a polyurethane foam having a bulk density in the range of about 2 to

about 40 pounds per cubic foot, wherein (a) the polyisocyanate component contains an

isocyanate-terminated prepolymer made by reacting an excess of an organic polyisocyanate

with (i) at least one polyol and (ii) at least one hydroxy-functional acrylate, (b) the polyol

component contains an effective amount of a blowing agent and isocyanate-reactive materials

that include at least one hydrophobic polyol selected from the group consisting of castor oil,

soybean oil, and combinations thereof; [and] (c) the ratio of isocyanate groups in the

polyisocyanate component to the number of isocyanate-reactive groups in the polyol component

is less than 1:1, wherein the volume ratio of the polyisocyanate component to polyol component

is about 1:1; and (d) the polyisocyanate component has a functionality of between about 2.0 and

about 4.0.

20. (Original) The invention according to claim 19, wherein the hydroxy-functional

acrylate is a methacrylate.

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- 21. (Original) The invention according to claim 19, wherein at least one polyol in the polyol component contains a tertiary amine group.
- 22. (Original) The invention according to claim 19, wherein the catalyst includes a reactive amine catalyst.
- 23. (Original) The invention according to claim 19, wherein the blowing agent is water or a chemical blowing agent that releases CO₂.
- 24. (Original) The invention according to claim 19, wherein the organic polyisocyanate is MDI or a polymeric MDI.
- 25. (Original) The invention according to claim 19, wherein the foam is formed into an automotive component.

26-47. (Canceled)